Chapter 6 Implementation Challenges

Throughout the Water Plan Update 2003, several overarching challenges have been identified, which in some way affect the ability to improve water management in California. These overarching challenges are most apparent when considering the implementation of the resource management strategies and are described below. .

Perspective on Challenges

1) Within each strategy, the type and severity of challenges will vary significantly on a project-by-project basis.
2) Challenges within each strategy will progressively increase as the less challenging projects (i.e. most cost-effective, technically feasible, etc) within each strategy are implemented.

1. Uncertainty of potential project impacts due to limitations in data, analytical tools, and basic understanding of complex water resource systems.

   For example, there is rarely a complete regional network to monitor groundwater levels, water quality, land subsidence, or the interaction of groundwater with surface water and the environment. Also, there is often a reluctance of individuals who own groundwater monitoring or supply wells to provide information or allow access to collect additional information. The result is that decisions related to groundwater management must be made with only approximate knowledge of the "true" system. This uncertainty can make any change in operation of groundwater storage unpredictable and controversial.

2. High cost and lack of consistent funding to evaluate complex water resource systems, maintain existing infrastructure, and implement new projects.

   For example, urban runoff management requires both source control, including education, and structural controls. In highly urbanized areas, major costs include purchasing land for and constructing treatment facilities. Local municipalities have limited ability to pay for retrofitting of existing developed areas with existing budgets and there is a concern about the economic impacts of raising taxes and requiring residents and businesses to pay for retrofitting existing development.

3. Belief by some that existing laws and oversight does not adequately protect against potential project impacts. Of particular concern are impacts to the environment, third parties, drinking water quality, public trust resources, economically disadvantaged people, and local economies.

   For example, there is a concern by some that existing laws and oversight are not adequate for water transfers, particularly those that involve

pumping groundwater or crop idling and crop shifting. Conversely, there is also concern that efforts to more heavily regulate water transfers may unnecessarily restrict many short-term, intra-regional transfers that have multiple benefits during times of water scarcity and that have little likelihood of direct or indirect impacts. The key challenge is how to balance these concerns to allow water transfers to continue as a viable water management strategy while having mechanisms to minimize effects on others.

4. The need to more effectively integrate and streamline the oversight and management of water resources to obtain multiple benefits in a manner that is sustainable, affordable, and that reduces redirected impacts.

   For example, the role of watersheds in sustaining our economies, businesses and communities is not fully appreciated. Providing for a greater understanding of watershed dynamics and how our communities and economies rely on their local watersheds will require working within formal educational settings, encouraging and engaging various sectors of the business community to become involved in watershed management, and providing opportunities and incentives to the larger community to be involved in watershed management.